

How to implement technology in learning easily

Workshop No. 4

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Introduction

- Implementing technology in university education can be a challenging process, as it requires a significant investment of time and resources.
- This is coupled with the challenge of diversity in the classroom, in terms of disability, background and /or digital abilities.
- The UDL(universal design learning) framework is deployed to ensure an easy implementation of technology in learning.
- This module is connected with the pillars “Content & Curricula” and “Teaching and learning practices of DigCompOrg”.

Learning objectives and expected outcomes

- To design learning interventions using technology meeting all students' needs, preferences and abilities.
- To explain how technology can be a useful instrument to guarantee that all learners may achieve the expected goals.
- To learn how to transform courses by embedding technology in learning interventions in an efficient manner.

1. Technology in University education. An overview.

There are multiple techs that can be used in the classroom for different purposes, i.e.: LMS (learning management system) and online platforms, collaborative technologies, virtual reality, gamification, and so on.

- Are all technologies susceptible to being properly used by all students?
- Do we have to use all these technologies?
- Can we implement them in an easy way?

2. The Universal Design Learning framework

Universal Design Learning (universal design learning) implementation provides the opportunity for all students to access, participate in, and progress in the general-education curriculum by reducing barriers to instruction.

<https://UniversalDesignLearningguidelines.cast.org/>

There are 9 guidelines to look at, three per principle, with different levels.



2. The Universal Design Learning framework

Some concepts:

- **Accesible technology** can include things like software and websites that are designed to be used with screen readers, hardware devices with large buttons or easy-to-use interfaces, and other technology that is designed to be usable by people with a wide range of abilities.
- **Assistive technology** can include everything from specialized software and hardware, to devices and tools that are used to help with communication, mobility, and other aspects of daily living to enhance the functional capabilities of individuals with disabilities.
- **Perceived ease of use:** the degree to which a person believes that using a particular system would be free from effort" (Davis 1989)

2. The Universal Design Learning framework

Universal Design Learning 3-step process:

1. define appropriate goals that allow for multiple means of attainment
2. assess diverse learner needs
3. evaluate barriers that may exist within the current curriculum and context

Use this information to develop the Universal Design Learning principles:

1. Multiple means of engagement
2. Multiple means of representation
3. Multiple means of action and expression

3. Activity (40')

1. Use the three-step methodology in specific context (e.g. a course you are teaching at the moment, or a course you teach in a recurrent manner)
2. Look at the factsheets in <https://schoolvirtually.org>
3. Use this information to develop your own technology-based Universal Design Learning approach for, at least, one example per principle.
4. Get in teams of three and explain your proposals. Discuss which barriers you might face and how you could facilitate its implementation.

Final reflections

- Technology is merely a support, a tool. Remember unit 1.
- Make sure to identify those tools that are feasible for the majority, if not all, students: popular, free, versatile. Ease of use is key.
- Use assistive technologies and accessible materials.
- Do not forget the power of learning and teaching networks. Remember unit 2.
- Always consider the safety and confidentiality of students and teachers, to prevent resistance.

References and materials

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Factsheets



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